Open European Location Services

OpenELS and Linked Spatial Data
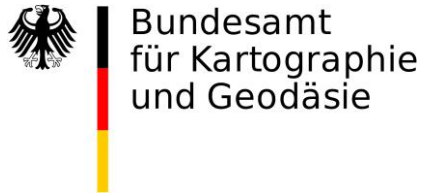Roy H.Mellum, Erwin Folmer, Stan Ronzhin
SDI.Next Linked Spatial Data event, Amersfoort
12th of March 2019

Open ELS project started in May 2017 and runs for 2 years

Overview project partners

Objectives of Open ELS

**Open ELS provide European open data services to maximise the**

- Use of authoritative geospatial information by providing certainty about what is free, what is charged for and under what terms and conditions

- Benefits of open geospatial information from official national sources by making it easy to find, access and re-use

- Contribution of public authorities responsible for mapping, cadastre and land registries in delivering user-focused open data for European Location Services

OpenELS and Linked Spatial Data

- Task as described in the Project Agreement:

> *'Geographical names, addresses and administrative unit are good candidates for being exposed as linked data (RDF-format), and Open ELS will demonstrate how this can be done. In addition, persistent identifiers will be tested and published as RDFs and SPARQLs'*

- Involved project partners : KADNL, CNIG(ES), NLS-FI, KARTV(NO)
- Task leader Erwin Folmer

Co-financed by the European Union
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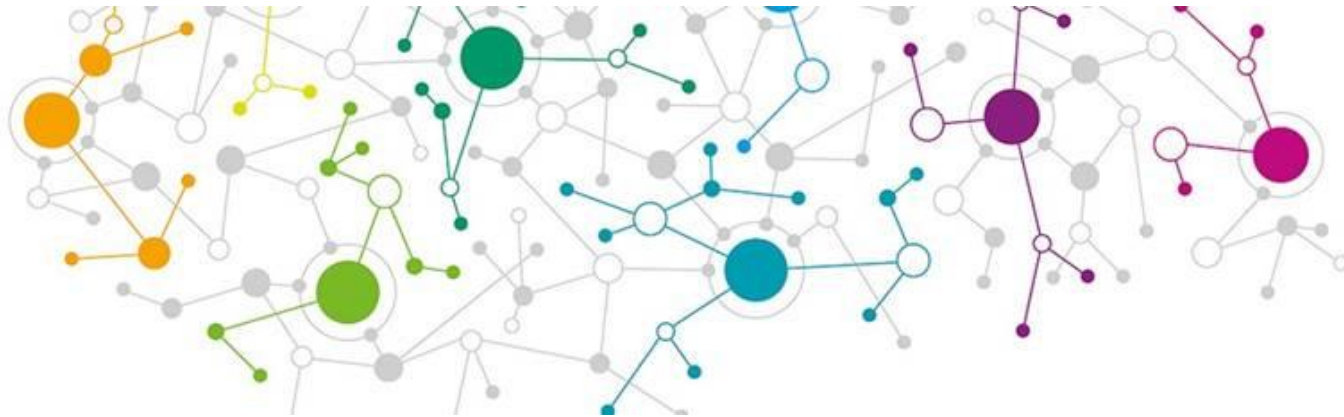
Main Activities and Tangible results(1)

- The AU and GN (both Inspire schemas)from Norway, Finland, and Netherlands have been transformed to Linked Data and are published. Spain at final stages.
    - Multitude of methods and tools to publish national LD
    - All four countries experimented with Linked Data
    - Setting up triple stores, data models, processing pipelines
    - Around 55 000 000 triples published

- We used ontologies and approach as provided by the JRC.

- We included links to dbpedia.

Main Activities and Tangible results(2)

- We loaded the URIs into the Geolocator(OpenELS Gazzeteer service)

- We included the background maps of Norway, Finland, Spain, Netherlands in YASGUI (open source graphical user interface for SPARQL)

- A paper publication in writing

- We created a data story to showcase the potential of linked data

The Data Story

Data Story demonstrating capabilities of semantic querying over national endpoints:

- Federated querying – one access point to national data
- Transparent semantic mapping in queries
- Language independent question answering
- Presence on the Semantic Web - links to

    - Dbpedia, Wikidata...

- Support for "fitness for use" decision making
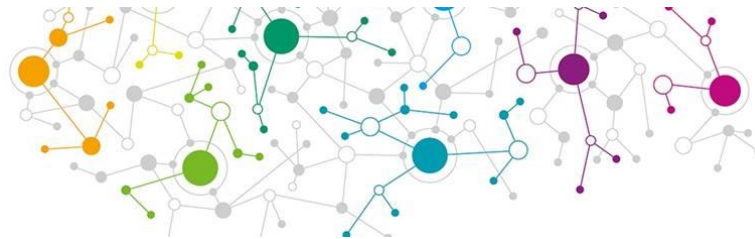
Linked Spatial Data in Norway Infrastructure Kartverket:
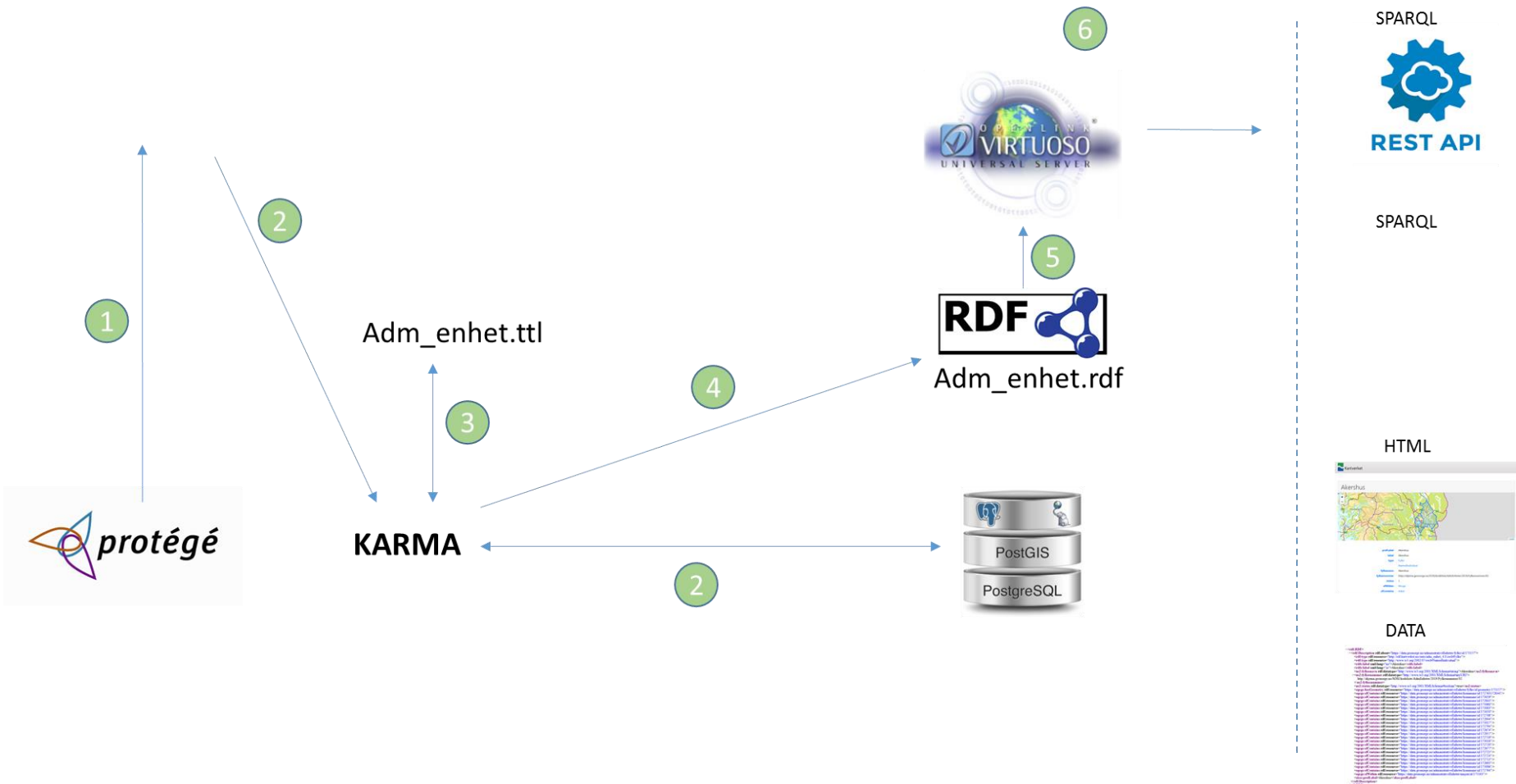
Linked Spatial Data in Norway - Status

- Not yet brought to the table for broader SDI work

- Norwegian Mapping Authority in the process of clarifying if LOD should be an official product
  - Collecting experiences and best practices
  - Technology implications
  - Cost/Benefit

- A few use cases has been identified

- Possible pri 1 Datasets :
  - Administrative units(Proto ok), Geographical Names and Addresses.
  - Will be published in National Schemes (linked to intl ontologies)

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Linked Spatial Data in Norway – Status contd.

- NMA has passed 'Sandbox' stage, thanks to OpenELS

- Some experiences:
    - Tools now much more mature
    - Ontology
        - Challenging part of the process for us
        - Reuse where applicable
        - Use as many predicates as possible
    - URI's
        - Not yet an agreed National 'syntax'
        - Challenge to define the Datasett/featuretype section

EXAMPLE: https://data.geonorge.no/administrativeEnheter/fylke/doc/173157